

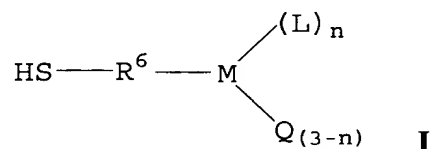
### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1. (original) In the process of producing a chemically treated filler by contacting an acidic aqueous suspension of an amorphous or particulate inorganic oxide selected from precipitated silica, colloidal silica or mixtures thereof with a coupling agent to form an acidic aqueous suspension of chemically treated filler, optionally in the presence of a surfactant and/or a water miscible solvent, and recovering said filler, the improvement comprises using as said coupling agent a combination of (a) mercaptoorganometallic compound and (b) non-sulfur organometallic compound(s) in a weight ratio of (a) to (b) of at least 0.05:1 in an aqueous suspension of inorganic oxide having a pH of 2.5 or less, and treating the acidic aqueous suspension of the chemically treated filler with acid neutralizing agent(s) to increase the pH of said suspension to a range of from 3.0 to 10.

2. (previously presented) The process of claim 1 wherein the mercaptoorganometallic material is represented by the following graphic formula I:



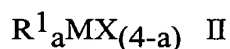
wherein M is silicon, L is halogen or  $-\text{OR}^7$ , Q is hydrogen,  $\text{C}_1\text{-C}_{12}$  alkyl, or halosubstituted  $\text{C}_1\text{-C}_{12}$  alkyl,  $\text{R}^6$  is  $\text{C}_1\text{-C}_{12}$  alkylene,  $\text{R}^7$  is  $\text{C}_1\text{-C}_{12}$  alkyl or alkoxyalkyl containing from 2 to 12 carbon atoms, said halogen or (halo) groups being chloro, bromo, iodo or fluoro, and n is 1, 2 or 3.

3. (original) The process of claim 2 wherein L is  $-\text{OR}^7$ ,  $\text{R}^6$  is  $\text{C}_1\text{-C}_3$  alkylene,  $\text{R}^7$  is  $\text{C}_1\text{-C}_4$  alkyl and n is 3.

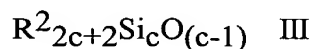
4. (original) The process of claim 2 wherein the mercapto group of the mercaptoorganometallic material is blocked.

5. (original) The process of claim 1 wherein the mercaptoorganometallic material is selected from mercaptomethyltrimethoxysilane, mercaptoethyltrimethoxysilane, mercaptopropyltrimethoxysilane, mercaptomethyltriethoxysilane, mercaptoethyltripropoxysilane, mercaptopropyltriethoxysilane, (mercaptomethyl)dimethylethoxysilane, (mercaptomethyl)methyldiethoxysilane, 3-mercaptopropyl-methyldimethoxysilane and mixtures thereof.

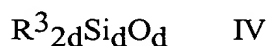
6. (original) The process of claim 1 wherein the non-sulfur organometallic compound(s) is selected from the group consisting of organometallic compound(s) represented by formula II:



organometallic compound(s) represented by formula III:



organometallic compound(s) represented by the formula IV:



organometallic compound(s) represented by formula V:



and a mixture of said organometallic compounds; wherein each M is independently silicon, titanium or zirconium; each  $R^1$  is independently a hydrocarbon group of from 1 to 18 carbon atoms or  $R^1$  is an organofunctional hydrocarbon group of from 1 to 12 carbon atoms wherein,

said functionality is amino, carboxylic acid, carbinol ester, or amido; each X is independently selected from the group consisting of halogen, amino, alkoxy groups of from 1 to 12 carbon atoms and acyloxy groups of from 1 to 12 carbon atoms, a is the integer 1, 2 or 3; each R<sup>2</sup> is independently halo, hydroxy, or a hydrocarbon group containing from 1 to 18 carbon atoms with the proviso that at least 50 mole percent of the R<sup>2</sup> substituents are hydrocarbon groups containing from 1 to 18 carbon atoms, c is an integer from 2 to 10,000; each R<sup>3</sup> is independently halo, hydroxy, or a hydrocarbon group containing from 1 to 18 carbon atoms and d is an integer from 3 to 20; each R<sup>4</sup> is independently hydrogen or a hydrocarbon group containing from 1 to 18 carbon atoms and k is 1 or 2; and said halo or halogen is selected from chloro, fluoro, bromo or iodo.

7. (original) The process of claim 1 wherein the non-sulfur organometallic compound(s) is selected from the group consisting of diethyldichlorosilane, allylmethyldichlorosilane, methylphenyldichlorosilane, phenylethyldiethoxysilane, 3,3,3-trifluoropropylmethyldichlorosilane, trimethylbutoxysilane, sym-diphenyltetramethyldisiloxane, trivinyltrimethyl-cyclotrisiloxane, octamethylcyclotetrasiloxane, hexaethyldisiloxane, pentylmethyldichlorosilane, divinylpropoxysilane, vinyldimethylchlorosilane, vinylmethyldichlorosilane, vinyldimethylmethoxysilane, trimethylchlorosilane, trimethylmethoxysilane, trimethylethoxysilane, methyltrichlorosilane, methyltrimethoxysilane, methyltriethoxysilane, hexamethyldisiloxane, hexenylmethyldichlorosilane, hexenyldimethylchlorosilane, dimethylchlorosilane, dimethyldichlorosilane, dimethyldimethoxysilane, dimethyldiethoxysilane, hexamethyldisilazane, trivinyltrimethylcyclotrisilazine, polydimethylcyclosiloxanes comprising 3 to about 20 dimethylsiloxy units, tetra(C<sub>1</sub>-C<sub>18</sub>)alkoxy titanates, methyl triethoxy titanium (iv), methyl titanium (iv) triisopropoxide, methyl titanium (iv) tributoxide, methyl titanium (iv) tri-t-butoxide, isopropyl titanium (iv) tributoxide, butyl titanium (iv) triethoxide, butyl titanium (iv) tributoxide, phenyl titanium (iv) triisopropoxide, phenyl titanium (iv) tributoxide, phenyl titanium (iv) triisobutoxide, [Ti(CH<sub>2</sub>Ph)<sub>3</sub>(NC<sub>5</sub>H<sub>10</sub>)] [Ti(CH<sub>2</sub>SiMe<sub>3</sub>)<sub>2</sub>(NEt<sub>2</sub>)<sub>2</sub>], tetra(C<sub>1</sub>-C<sub>18</sub>)alkoxy zirconates, phenyl zirconium (iv) trichloride, methyl zirconium (iv) trichloride, ethyl zirconium (iv) trichloride, propyl zirconium (iv) trichloride, methyl zirconium (iv)

tribromide, ethyl zirconium (iv) tribromide, propyl zirconium (iv) tribromide, chlorotripropyl zirconium (iv) and mixtures of such organometallic compounds.

8. (original) The process of claim 6 wherein the non-sulfur organometallic compound(s) is represented by formulae II, III, IV, V or a mixture of said organometallic compound(s) wherein each M is silicon.

9. (original) The process of claim 6 wherein the non-sulfur organometallic compound(s) is represented by formula II wherein  $R^1$  is  $C_1-C_6$  alkyl, X is chloro, a is 2 and the inorganic oxide is precipitated silica.

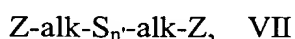
10. (original) The process of claim 1 wherein the weight ratio of (a) to (b) is from 0.05:1 to 10:1.

11. (original) The process of claim 9 wherein the weight ratio of (a) to (b) is from 0.2:1 to 2:1.

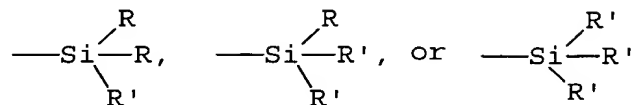
12. (original) The process of claim 1 wherein (a) mercaptoorganometallic compound is replaced by a combination of mercaptoorganometallic compound and bis(alkoxysilylalkyl)polysulfide in a weight ratio of mercaptoorganometallic compound to bis(alkoxysilylalkyl)polysulfide of from at least greater than 1:1.

13. (original) The process of claim 12 wherein the weight ratio of mercaptoorganometallic material to bis(alkoxysilylalkyl)polysulfide is from 5:1 to 50:1 and the inorganic oxide is precipitated silica.

14. (original) The process of claim 12 wherein the bis(alkoxysilylalkyl)polysulfide is represented by the following graphic formula VII:



in which alk is a divalent hydrocarbon radical having from 1 to 18 carbon atoms; n' is a whole number of 2 to 12 and Z is:



wherein R is an C<sub>1</sub>-C<sub>4</sub> alkyl or phenyl group, and R' is an C<sub>1</sub>-C<sub>8</sub> alkoxy, a C<sub>5</sub>-C<sub>8</sub> cycloalkoxy, or a C<sub>1</sub>-C<sub>8</sub> alkylmercapto group.

15. (original) The process of claim 12 wherein bis(alkoxysilylalkyl)polysulfide is selected from the group consisting of  
 3,3'-bis(trimethoxysilylpropyl)disulfide,  
 3,3'-bis(triethoxysilylpropyl)tetrasulfide,  
 3,3'-bis(trimethoxysilylpropyl)tetrasulfide,  
 2,2'-bis(triethoxysilylethyl)tetrasulfide,  
 3,3'-bis(trimethoxysilylpropyl)trisulfide,  
 3,3'-bis(triethoxysilylpropyl)trisulfide,  
 3,3'-bis(tributoxysilylpropyl)disulfide,  
 3,3'-bis(trimethoxysilylpropyl)hexasulfide,  
 3,3'-bis(trioctoxysilylpropyl)tetrasulfide and mixtures thereof.

16. (previously presented) A product of the process of claim 1.

17. (original) A product of the process of claim 4.

18. (original) A product of the process of claim 12.